REMARKS/ARGUMENTS

I. AMENDMENTS

Claims 5-7, 21-31 and 33-36 stand rejected. With entry of this Amendment, Applicants correct the incorrectly numbered claims presented with the previous Amendment (submitted May 9, 2003), per the Examiner's helpful instructions. Applicants have amended claim 5 to delete the reference to the term "*in vitro*" and to recite the phrase,"wherein said method comprises selecting a cell whose infectivity is to be increased, and co-administrating said micro-calpain inhibitor and said viral vector to said cell." Support for this amendment is found in the specification, for example, at page 36, lines 11-17. Claim 22 has been amended to to substitute the phrase "comprises" for the term "encodes." Claim 35 has been amended to change its dependency from claim 32 (previously canceled) to claim 5, and also to delete the term "*in vitro*." New claim 37 has been added. Claim 37 is supported by the claims as originally filed and by the specification at, *e.g.*, page 38, lines 3-34. No new matter is added by any of the aforementioned claim amendments.

With entry of this Amendment, Applicants also correct the inadvertent omission of a reference to a particular Example in the specification. Specifically, at page 20, line 29, the specification is amended to recite "Example 3, herein," instead of "Example __ herein." Support for this Amendment can be found in the Specification as originally filed, *e.g.*, in Example 3. Applicants respectfully submit that one skilled in the art would easily recognize from the specification which of the Examples Applicants intended to refer to in the passage at issue. Therefore, this correction does not constitute the addition of new matter to the specification.

Finally, Applicants have amended the specification to identify all disclosed sequences by a sequence identifier, in accordance with 37 C.F.R. 1.821(d), and Applicants have included a Sequence Listing. Additional remarks related to these amendments appear in Section IV ("Sequence Listing") of this Amendment and Response.

II. RESPONSE TO CLAIM REJECTIONS UNDER 35 U.S.C. § 112, PARAGRAPH 2

The Examiner rejected claims 5-7, 21-31, and 33-36 as indefinite in their recitation of "wherein said method is practiced *in vitro* or *ex vivo*" because, according to the Examiner, "it is unclear what the distinction is between *in vitro* and *ex vivo* in the context of the claimed method." *See* Office Action at 4. Applicants have amended claim 5 to delete reference to the term, "*in vitro*," rendering the Examiner's rejection moot. With respect to the meaning of the term *ex vivo*, Applicants' Specification teaches that:

> *Ex vivo* gene therapy refers to the administration of an expression vector comprising a nucleotide sequence encoding p53 to a population cells obtained from a living organism with the expectation of those cells being reimplanted into the organism. *Ex vivo* gene therapy is described in Anderson, *et al.* United States Patent No. 5,399,346 issued March 21, 1995. Examples of *ex vivo* gene therapy include the purging of tumor cells from stem cell products.

See Specification at page 9, line 32 - page 10, line 3.

The Examiner also rejected claim 22 as indefinite in its recitation of the phrase "wherein said replication-deficient adenoviral vector encodes a therapeutic transgene," because, according to the Examiner, "a vector does not encode a transgene, although it can comprise a transgene." *See* Office Action at pages 4-5. To facilitate prosecution of the application, Applicants have amended claim 22, per the Examiner's suggestion, to recite "wherein said replication deficient adenoviral vector comprises a therapeutic transgene." Applicants respectfully submit that the scope of claim 22 is not affected by this amendment.

On page 5 of the Office Action, the Examiner also rejected claims 22-27 as indefinite in their recitation of "therapeutic transgene," because, according to the Examiner, "a transgene cannot have a therapeutic effect *in vitro*." Applicants respectfully submit that one skilled in the art would not construe the meaning of claims 22-27 so broadly. The Examiner's argument is moot, however, in light of Applicants' deletion of the term, "*in vitro*," from claim 5, as discussed above.

Finally, the Examiner rejected claim 35 as indefinite because "[claim 35] depends from Claim 32, which has been cancelled." *See* Office Action at page 5. As originally filed,

claim 32 depended directly from claim 5 and recited a limitation wherein the method was to be practiced *in vitro*. Claim 35 has been amended to directly depend from claim 5 and the reference to the term "*in vitro*" has been deleted.

For all the aforementioned reasons, Applicants respectfully submit that their pending claims, as amended, are not indefinite. Applicants respectfully request withdrawal of the Examiner's rejections under 35 U.S.C. § 112.

III. RESPONSE TO CLAIM REJECTIONS UNDER 35 U.S.C. § 102

The Examiner rejected all of the pending claims under 35 U.S.C. § 102(b) as anticipated by Claudio *et al.* Similarly, the Examiner rejected all of the pending claims under 35 U.S.C. § 102(e) as anticipated by Potter *et al.* *See* Office Action at pages 5-6.

Applicants respectfully submit that Applicants' amendment of claim 5 renders the Examiner's anticipation arguments moot. Applicants' claim 5 recites a method of increasing the infectivity of a cell to a viral vector *ex vivo* comprising the step of co-administrating a micro-calpain inhibitor and the viral vector to a cell whose infectivity is intended to be increased. Neither Claudio *et al.* nor Potter *et al.* teach such a method, explicitly or inherently.

All of Applicants' claims depend directly or indirectly from claim 5. Because neither Claudio *et al.* nor Potter *et al.* teach all of the limitations of claim 5, none of Applicants' claims are anticipated. Applicants therefore respectfully request withdrawal of the Examiner's rejections under 35 U.S.C. § 102.

IV. SEQUENCE LISTING

Amendments to paragraphs beginning on pages 29, 42 and 43 insert sequence identifiers at the proper locations in the Specification in adherence with 37 C.F.R. §§1.821 to 1.825.

The amendment to the paragraph beginning on page 43, line 15 corrects an error of a typographical nature made without deceptive intent. The nucleotide sequence for Primer "B" (3' Taqman p53) on lines 26-27 contains an extraneous 3' terminal "A" residue which has

been omitted by amendment. Justification for this amended sequence may be found at page 42, lines 21-22, where this Primer "B" is shown without the omitted terminal "A" residue.

Applicants request entry of this amendment in adherence with 37 C.F.R. §§1.821 to 1.825. This amendment is accompanied by a floppy disk containing the above named sequences, SEQ ID NOS:1-7, in computer readable form, and a paper copy of the sequence information which has been printed from the floppy disk.

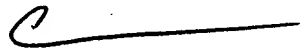
The information contained in the computer readable disk was prepared through the use of the software program "PatentIn" and is identical to that of the paper copy. This amendment contains no new matter.

CONCLUSION

In view of the forgoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

Respectfully submitted,



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Attachments
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